

REMARKS

Applicants respectfully submit a Request for Continued Examination, and address the Examiner's rejections in the final office action mailed July 25, 2003. New claims 35-38 have been added. Claim 15 has also been amended to expedite prosecution without acquiescing to the Examiner's arguments. Applicants reserve the right to prosecute broader claims in the future. No new matter has been added. The claims and amendments are supported in the specification, at least at page 6 at ¶ 2, page 9 at ¶1, Example 2, and Table 1 and 3. Applicants address the pending rejections in view of the amended and new claims.

Double Patenting

Claims 15-34 were rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1-12 of U.S. Patent No. 6,074,666. Applicants thank the Examiner for maintaining the rejection in abeyance pending a notification of allowable claims.

Rejection under 35 U.S.C. §102(e)

Claims 15-20 and 30-34 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Madden (U.S. Patent No. 5,389,378). Applicants must respectfully disagree. As amended, claim 15 relates to liposomes with a mean particle size distribution of between 130 nm and less than 200 nm. In contrast, the liposomes in Madden have a mean particle size distribution of no greater than 120 nm (see abstract). Because Madden does not teach each and every element of the claimed invention, the claims are not anticipated. Thus, Applicants request that this rejection be withdrawn.

Rejection under 35 U.S.C. §103(a)

Claims 26-27 and 33-34 were rejected under 35 U.S. C. § 103(a) as allegedly being unpatentable over Madden. Claims 20-25 were also rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over Madden. However, the Examiner concedes that Madden does not teach all the porphyrin derivatives recited in the claims (Final Office Action, page 6). Applicants must respectfully disagree.

As previously indicated, Madden describes liposomes having a mean particle size distribution of not greater than 120 nm in diameter. Thus, Madden teaches away from the present invention, which relate to liposome formulations having a mean particle size distribution of between 130 nm and less than 200 nm. Accordingly, claims 20-27 and 33-34 are nonobvious under Madden, and Applicants respectfully request that this rejection be withdrawn.

Claims 28-29 were also rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over Madden in view of Barenholz (U.S. Patent No. 4,797,285). Applicants must respectfully disagree. As previously indicated, Madden teaches away from the presently claimed invention. Furthermore, there is no motivation to combine Madden and Barenholz because the liposomes in Barenholz are predominantly in the size range of 0.05 to 0.5 microns (see col. 3, lines 24-25), while the liposomes in Madden are no greater than 120 nm. Barenholz also teaches away from the liposomes of the claimed invention, which have a size of less than 200 nm. Furthermore, Barenholz is silent regarding porphyrins. Accordingly, claims 28-29 are nonobvious over Madden in view of Barenholz, and Applicants respectfully request that this rejection be withdrawn.

Claims 15-20 and 25-34 were also rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over Thompson (U.S. patent 5,277,913) or Kappas (5,010,073) in view of Crowe (4,875,319), and further in view of Madden. Applicants must respectfully disagree. First, there is no motivation to combine the references. Thompson and Kappas teach liposomal porphyrins for use in photodynamic therapy, and are silent regarding sugars, let alone liposomal formulations comprising one or more sugars. Crowe describes a method for preserving liposomes using sugars, and has nothing to do with porphyrin systems for photodynamic therapy. Crowe also teaches liposomes having a size greater than 120 nm. For example, Crowe teaches the rehydration of vesicles of a size 200 nm, 100 nm, 50 nm and 25 nm (col. 3, lines 62-63). In contrast, Madden teaches that sugars may be omitted in certain liposomal compositions that retain their integrity upon rehydration, and teaches liposomal formulations having a size no greater than 120 nm. Thus, Crowe teaches away from Madden, and the combination is improper. Second, even if combined, the combination fails to teach the presently claimed invention. Specifically, none of the references alone or in combination teaches liposomes having a mean particle size distribution of between 130 nm and less than 200 nm. Thus, Applicants respectfully request that this rejection be withdrawn.

Claims 28-29 were also rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over Thompson or Kappas, in view of Crowe and Madden, and further in view of Barenholz. Applicants must again respectfully disagree. As previously indicated, there is no motivation to combine Thompson, Kappas, Crowe or Madden. This lack of motivation to combine is not alleviated by Barenholz, which as previously indicated, is silent regarding porphyrins and also teaches liposomes predominantly in the size range of 0.05 to 0.5 microns. Thus, Barenholz teaches away from Madden's teaching of liposomes having a size of no greater than 120 nm for the same reasons that Crowe teaches away from Madden. Furthermore, even if combined, the combination does not teach the presently claimed invention as none of the references teaches liposomal formulations having a mean particle size distribution of between about 130 nm and less than 200 nm.

New claims 37-38

Furthermore, claims 37-38 are allowable. First, Madden is not prior art with respect to these claims. As indicated in David Dolphin's declaration, which was previously submitted in U.S. serial application 08,489,850, now U.S. patent 6,074,666 ("DECLARATION OF DAVID DOLPHIN PURSUANT TO 37 C.F.R. § 1.131(a)," Exhibit 1), BPD-MA liposomes prepared by combining BPD-MA, dimyristoyl phosphatidyl choline (DMPC) and egg phosphatidyl glycerol (EPG) were made prior to August 17, 1990. Since such liposome formulations constitute actual reduction to practice of a species encompassed by new claims 37-38 prior to the effective filing date of Madden, Madden is not prior art with respect to claims 37-38. Second, none of the prior art cited by the Examiner describe liposome formulations comprising dimyristoyl phosphatidylcholine, phosphatidyl glycerol, and a porphyrin macrocycle photosensitizer. Thus, Applicants respectfully request that these claims be passed to allowance.

Finally, regarding the declaration, the instant submission of a declaration by assignee was necessitated because a declaration by all of the inventors was not possible. This practice is authorized pursuant to 37 C.F.R. § 1.131 and MPEP 715.04. Furthermore, the recordation of name changes of the assignee of record, now known as QLT Inc., is attached at Exhibit 2. The following summarizes the chain of title:

By assignment from the inventors to QUADRA LOGIC TECHNOLOGIES INC., a British Columbia corporation. The assignment was recorded on November 16, 1992 at Reel 6363, Frame 0823.

QUADRA LOGIC TECHNOLOGIES INC. changed its name to QLT PHOTOTHERAPEUTICS INC., as evidenced by the certified copy of the Certificate of Change of Name from British Columbia.

QLT PHOTOTHERAPEUTICS INC. changed its name to QLT INC., as evidenced by the certified copy of the Certificate of Change of Name from British Columbia, and recorded change of name at Reel 011071, Frame 0236.

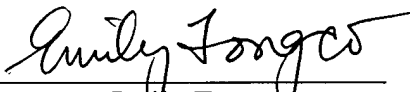
CONCLUSION

Applicants believe that all issues raised in the Office Action have been properly addressed in this response. Accordingly, reconsideration and allowance of the pending claims is respectfully requested. If the Examiner feels that a telephone interview would serve to facilitate resolution of any outstanding issues, the Examiner is encouraged to contact Applicants' representative at the telephone number below.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicant(s) petition(s) for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 273012008102.

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Respectfully submitted,

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